

°C Grid

Applications

- Automotive Cabin Comfort Testing & Defrost Analysis
- In-Duct HVAC Airflow Analysis
- HEPA Filtration System Certification
- CFD Testing in Engine Chassis Components
- IT Rack Airflow and Inlet Temperature Measurement
- Data Center Perforated Tile CFM Airflow Calculation

Degree Controls, Inc.

is an ISO-9001 certified, world-class designer and manufacturer of airflow sensing, monitoring, and control solutions. With over 20 years of proven experience, we pride ourselves on delivering solutions which provide the value, differentiation, and service required by our customers, to meet the rapidly changing competitive landscape that they face.

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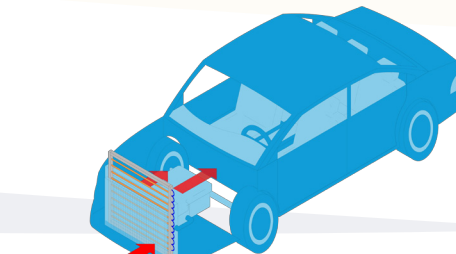
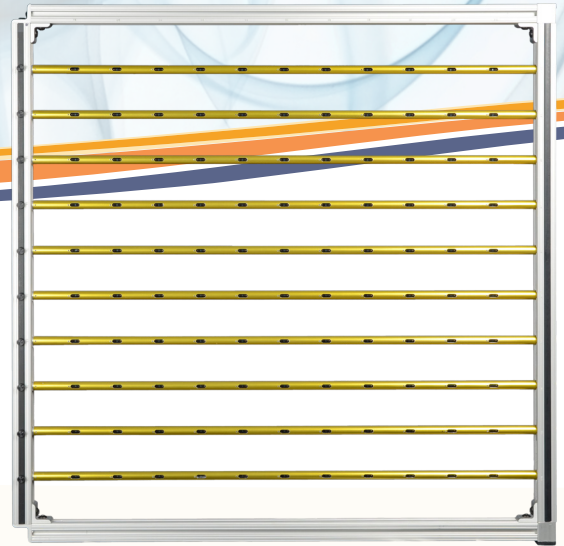
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Overview

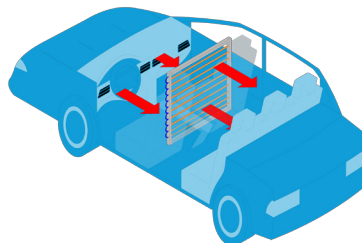
Whether you are testing the limits of complex HVAC designs or certifying ventilation efficacy in duct systems, circuit boards or laboratories, airflow is the crucial element that must be revealed and understood deeply to maximize operational safety and efficiency.

While the market provides an array of tedious, single-point measurement solutions such as hand-held anemometers, the °C GRID is a comprehensive, multi-scalar solution versatile enough for any application where airflow and thermal conditions must be measured, mapped or managed. With our °C GRID Sensor Array, airflow, ambient temperatures, and humidity can be measured and recorded at multiple points in real-time. The sensor array is built to user-defined dimensions and can accommodate an array of designs including portable grids and multi-tiered racks.

Our commitment to customization makes our product ideal for a range of applications, as it is custom tailored to suit client preferences. Our laboratory-grade air velocity, temperature, and humidity sensors transmit data to your PC through our multi-channel °C Port Data Acquisition Instruments. With our included data logging and analytics software, sensor data can be instantly recorded and visualized in real-time. For vastly superior collaboration, data can be easily exported to universal reporting formats or can be shared or accessed remotely via an online web portal application.



°C Grid can be used for Automotive Cabin Comfort Testing & Defrost Analysis



Features

- Best-in-class, miniature airflow sensors designed for measurement with minimal disruption to flow profile.
- User-specified housing length and sensor quantity, measurement range, and spacing
- Laboratory grade sensors for studying airflow across a planar region.
- Compatible with °C Port1200/3600 multipoint sensing instrument system for remote monitoring via web application on the PC or mobile.
- Custom text fixtures with multiple sensor pole arrays are available for complex measurement scenarios.

Specifications

Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 85°C
Relative Humidity (non-condensing)	5-95%
Supply Voltage	Wall Power

Airflow & Temperature Measurement

Air Velocity

Velocity Range: 0.5 to 20m/s (100 to 4,000fpm)
Temperature Compensation Range: 0-70°C (32-158°F)
Accuracy: 0.5 to 10m/s (100 to 2,000fpm)
± (4% of reading + 0.10m/s [20 fpm])
Repeatability (the greater of): 1% or ±0.01m/s (2fpm)

Temperature Compensation Range: The °C Grid is a series of thermal airflow sensors which is sensitive to changes in air density and indicates velocity with reference to a set of standard conditions 25°C (77°F), 760mmHg (101.325kPa), and 0%RH. The °C Grid has been designed so that when used over the stated temperature compensation range, the sensor indicates very close to actual air velocity and minimal compensation is only required to account for changes in barometric pressure or altitude.

Accuracy: Valid between 15-35°C (60-95°F), increasing by ±0.25% per degree and ±0.005m/s (1fpm) over remaining temperature compensation range.

Temperature

Measurement Range: 0-70°C (32-158°F)
Measurement Accuracy: ±2°C (3.6°F)
Resolution: ±0.1°C

Minimum Software Requirements

Windows 7, 8, and 10 OS®
50 MB Free Disk Space
1.0 GHz Processor
2 GB RAM